

CLAIMS

1. An air-cooled-type heat exchanging apparatus comprising:

5 an outdoor heat exchanger for air-cooling refrigerant circulating in a refrigerating cycle, mounted on a hybrid automobile provided with a running engine and a running motor; and

10 an integrated type radiator having a first radiator for air-cooling a first cooling water to cool the running engine, arranged in series to the first heat exchanger on the downstream side of the first heat exchanger in the air flowing direction and also having a second radiator for air-cooling a second cooling water to cool electric parts related to the running motor,
15 arranged in parallel with the first radiator on one side of the first radiator in the vertical direction,

wherein temperature of air flowing into the second radiator is made to be lower than temperature of air flowing into the first radiator.

20 2. An air-cooled-type heat exchanging apparatus according to claim 1, wherein the first heat exchanger is arranged so that it can be opposed to only the upstream side of the first radiator in the air flowing direction.

25 3. An air-cooled-type heat exchanging apparatus according to claim 1, wherein refrigerant flows only in a portion of the first heat exchanger opposed to the upstream side of the first radiator in the air flowing direction.

30 4. An air-cooled-type heat exchanging apparatus according to claim 1, wherein air resistance of a portion of the first heat exchanger opposed to the upstream side of the first radiator in the air flowing direction is higher than air resistance of a portion of the first heat exchanger opposed to the upstream side of the second radiator in the air flowing direction.

35 5. An air-cooled-type heat exchanging apparatus according to claim 1, wherein an outlet side of

refrigerant of the first heat exchanger is arranged being opposed to the upstream side of the second radiator in the air flowing direction.

6. An air-cooled-type heat exchanging apparatus according to claim 1, wherein the first heat exchanger is a refrigerant condenser for condensing and liquefying refrigerant by exchanging heat with air, and a supercooling portion of the refrigerant condenser for supercooling refrigerant liquid is arranged being opposed to the upstream side of the second radiator in the air flowing direction.

7. An air-cooled-type heat exchanging apparatus comprising:

a first heat exchanger for air-cooling refrigerant circulating in a refrigerating cycle, mounted on a hybrid automobile provided with a running engine and a running motor; and

an integrated type radiator having a first radiator for air-cooling a first cooling water to cool the running engine, arranged in series to the first heat exchanger on the downstream side of the first heat exchanger in the air flowing direction and also having a second radiator for air-cooling a second cooling water to cool electric parts related to the running motor, arranged in parallel with the first radiator on one side of the first radiator in the vertical direction,

wherein a flow rate of air flowing into the second radiator is made to be higher than a flow rate of air flowing into the first radiator.

8. An air-cooled-type heat exchanging apparatus according to claim 7, wherein the first heat exchanger is arranged being opposed only to the upstream side of the first radiator in the air flowing direction.

9. An air-cooled-type heat exchanging apparatus according to claim 7, wherein refrigerant is made to flow only in a portion of the first heat exchanger opposed to the upstream side of the first radiator in the air

flowing direction.